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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------------|------------------|
| 10/537,544   | 06/03/2005  | Markus Nicslony      | R.305847                   | 4767             |
| 2119   | 7590        | 05/25/2007           |                            |                  |
| RONALD E. GREIGG<br>GREIGG & GREIGG P.L.L.C.<br>1423 POWHATAN STREET, UNIT ONE<br>ALEXANDRIA, VA 22314 |             |                      | EXAMINER<br>RIVELL, JOHN A |                  |
|  |             |                      | ART UNIT                   | PAPER NUMBER     |
|  |             |                      | 3753                       |                  |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/537,544

**Applicant(s)**

NIESLONY ET AL.

**Examiner**

John Rivell

**Art Unit**

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/3/05 (application).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-15 and 19 is/are rejected.
- 7) ☒ Claim(s) 16-18 and 20-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06032005</u> . | 6) <input type="checkbox"/> Other: _____  |

By preliminary amendment filed concurrently with the application, original claims 1-8 have been canceled in favor of newly added claims 9-22 which are pending.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Numeral "44" as referred to repeatedly in paras [0011], [0012] and [0013].

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-14 are rejected under 35 U.S.C. §102 (b) as being anticipated by Barker.

The recitation "in particular for a high-pressure pump of a fuel injection system for an internal combustion engine" is a statement of intended use bearing no patentable weight.

The patent to Barker discloses a "check valve... comprising one piece valve housing (read on the one piece valve supporting means B including tubular member 19 lower annular flange 20 and the upper annular flange mating with surface 25) adapted to be inserted into a receptacle (within housing 4 between lower rabbit 17 and upper surface 25) in a pump housing part (4), a pistonlike valve member (26) guided longitudinally displaceably in the valve housing (B), which valve member (26) cooperates with a valve seat (25) embodied on the valve housing (B), the valve member (26) being urged in the closing direction by a prestressed closing spring (28) and in the opening direction by the pressure prevailing in an inlet (at 5), the valve member (26) being inserted into the valve housing (B) from the side of the valve seat (25), the valve housing (B) being cup-shaped and having both a (lower) bottom (at flange 20) and a (middle, intermediate) jacket region that has a recess (reads as the space within housing B inside of tubular member 19); the valve housing (B) pointing, with the (upper) open end of its recess, out of the receptacle (within housing 4); the valve seat (25) being located on the (lower) bottom of the valve housing (B), facing away from the recess; and the valve member (26) protruding with a shaft (27) through a bore (within boss 23) in the (lower) bottom into the recess in which the closing spring (27) is located" as recited in claim 9.

Regarding claim 10, in Barker, "the closing spring (27) is braced on one side on the inside of the (lower) bottom (of housing B), pointing into the recess (within tubular member 19), and on the other on a spring plate (29) connected to the shaft (27) of the valve member (26)" as recited.

Regarding claim 11, in Barker, "the recess (within tubular member 19) of the valve housing (B) is closed, on its (upper) end facing away from the bottom, by a cap (plug E)" as recited.

Regarding claim 12, in Barker, "the recess (within tubular member 19) of the valve housing (B) is closed, on its (upper) end facing away from the bottom, by a cap (plug E)" as recited.

Regarding claim 13, in Barker, "the recess (within tubular member 19) of the valve housing (B) communicates with an inlet region (within the housing 4 but outside of tubular member 19, communicating with 5) of the check valve" as recited.

Regarding claim 14, in Barker, "the recess (within tubular member 19) of the valve housing (B) communicates with an inlet region (within the housing 4 but outside of tubular member 19, communicating with 5) of the check valve" as recited.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barker in view of Hanemann.

The recitation of "in particular for a high-pressure pump of a fuel injection system for an internal combustion engine" is a statement of intended use bearing no patentable weight. Additionally, it is suggested that claim 15, line 1 be amended to read -- A check valve...--.

The patent to Barker discloses a "check valve, comprising one piece a valve housing (B) adapted to be inserted into a receptacle (within housing 4 between lower rabbit 17 and upper surface 25) in a pump housing part (4), a pistonlike valve member (26) is guided longitudinally displaceably in the valve housing (B), which valve member (26) cooperates with a valve seat (25) embodied on the valve housing (B), and the valve member (26) being urged in the closing direction by a prestressed closing spring (27) and in the opening direction by the pressure prevailing in an inlet (at 5), the check valve including an inlet (at 5) having at least one inlet conduit (21) and preferably a plurality of inlet conduits (plural ports 21), extending through the valve housing (B)" as recited in claim 15.

Thus the patent to Barker discloses all the claimed features with the exception of having "at least one inlet conduit (21) discharge in such a way into a bore (within tubular member 19) surrounding the valve member (28) that the longitudinal axis of the at least one inlet conduit (21) does not intersect the longitudinal axis of the bore (44a) surrounding the valve member (28)".

The patent to Hanemann discloses, in figure 2 for example, that it is known in the art to employ inlet ports at 43, passing through a "housing" wall "in such a way into a bore ... that the longitudinal axis of the at least one inlet conduit (43) does not intersect the longitudinal axis of the bore..." for the purpose of introducing a vortex or swirl motion to the inlet fluid.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Barker angled ports at ports 21 "in such a way into a bore (within the tubular member 19) that the longitudinal axis of the at least one inlet conduit (at 21) does not intersect the longitudinal axis of the bore (of tubular member 19)" for the purpose of introducing a vortex or swirl motion to the inlet fluid as recognized by Hanemann.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barker in view of Hanemann as applied to claim 15 above, further in view of Utsumi.

The patent to Barker, as modified by Hanemann, discloses all the claimed features with the exception of having "the valve member (include) a constriction in its region surrounded by the bore".

The patent application publication to Utsumi discloses, in fig. 1a for example, that it is known in the art to employ a "constriction" shown in a lower section of the otherwise uniform diameter valve stem 53 in the region of the inlet conduit 62 intersection with the bore (64) for the purpose of providing sufficient flow area during opening and when open for fluid to pass from the area upstream of seat 61 to and around valve head at 54 and to provide for a lesser weighted stem thus increasing sensitivity.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Barker, as modified by Hanemann, a "constriction" located in the valve stem 27 at the location of the intersection of the ports

21 and the inner space within tubular member 19 for the purpose of providing a lesser weighted stem thus increasing sensitivity as recognized by Utsumi.


Claims 16-18 and 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**John Rivell**  
**Primary Examiner**  
**Art Unit 3753**

j.r.